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Materiality and Beyond: Theorizing the Relevance of Artefacts along the Third Epistemological Route

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Exactly what does the ability to regulate the artefacts mean in practice? How do the artefacts influence rules and regulations in organizational life?

These questions continue a research agenda that began in the 1950s and has since spawned an array of studies and perspectives that straddle several academic disciplines. At first, the aim was to describe a brand new theme, the meeting of technologies and organizational contexts, on which much traction needed to be gained. The far from linear reflection process was further dogged by polemics and opposing views. A few decades later, the narrative that was traditionally anchored to an idea of cumulative learning, in which one theory was replaced with another that somehow represented its criticism or continuation and was meant to push the boundaries to improve on the previous one, lost its plausibility (Hatch, 2006).

When the debate started to shift its focus to the structure of theory, i.e., the 'researchers' conceptions of the nature and direction of causality' (Markus & Robey, 1988, p. 584), the linear narrative was replaced with a multifaceted story that, in accordance with the structure of theory adopted, i.e., technological imperative, organizational imperative and emergent perspective, gave at least three answers to the question: *"What is the relation between information technology and organization change?"* But still the fragmentation and clashing paradigms continued apace, as did the breakaways, the contaminations and the passing fads.

Few people today would dispute the claim that new technologies bring changes to the way people communicate, act, and organize their social relations (Kallinikos, Leonardi, & Nardi, 2012, p. 3).

The renewed academic interest for investigating the organizational relevance of artefacts is a clear indication of just how complex it is to get to grips with these themes, while underscoring the limitations of certain dominant responses. The distinction between objectivism and subjectivism has yet again reared its head, implying that the multiple theoretical perspectives are still stuck in the same old groove: how to decipher the tangled concept of social contexts and action in its many guises. Some of the terms proposed by the scholars, and the meanings not always attributed to them coherently, are an attempt to use new notions to overcome the inconsistencies and limitations of the theories that fell short of their objectives. This is the case, for instance, of the concept of

'materiality' and its numerous offshoots (e.g., socio-materiality), which has gained in popularity over recent years (Leonardi & Barley, 2010; Robey, Anderson, & Benoit, 2013).

For OAP 2014, I plan to sketch a more refined concept of technology, clarifying the assumptions and setting out the implications for research.

In particular, taking my cue from Masino (Masino, 2005, 2011), I will apply the term 'technology' to the meaning of *technical rationality*. A choice that is purposefully epistemological rather than terminological because it neatly sidesteps the objectivism/subjectivism issue.

For reasons of space, this proposal and its ability to deepen our understanding of the meeting of technologies, artefacts and organizational contexts can be narrowed down to four assumptions.

First, to bypass the limitations of the theoretical proposals that focus on the system and not on the actors and of those that, to the contrary, focus on the actions of the individuals yet ignore the environment that enables those actions, a good starting point is the third epistemological route, which sees the organization as a process of actions and decisions guided by bounded and intentional rationality. As observed by Masino (2005, 2011), when thus interpreted, the research's specific object of interest is the ongoing process of regulation.

Second, the technology, defined as *technical rationality*, is itself an organizational choice, fruit of the intentionally and rationally bounded decisional processes (Masino, 2005, p. 166). Note that this interpretation of technology severs any link to the presence of artefacts, materials and non-materials in the implementation of the action. For example, there is technical rationality in the action of the physician who uses sophisticated instruments to make a diagnosis, but also when the physician converses with the patient to give them his/her diagnosis. Hence, the technical relevance of the artefacts needs to be evaluated and analyzed in relation to the regulatory process.

And that is the first thing that differentiates Masino's approach from that of technology as the ineluctable presence of physical artefacts. Indeed, some theories are underpinned by a concept of technology so limited they consider exclusively the materiality of the artefacts. However, such a single-minded approach to the study of the regulation of social action and its relationship with technology ignores all those activities in which the artefacts are not used. So, to return to the earlier example, the action of a doctor who makes a diagnosis without the use of clinical instruments would be excluded from the study field, even though, when supported by a simple stethoscope, that same action would make it a full-fledged object of research and analysis.

Third, the adoption of any artefact (material or non-material) is organizationally relevant because it opens a window of change in the process of regulating both the individual and the collective action (Masino, 2005, 2011, p. 161). While material mediation is an important dimension of the study of practices (Lanzara, 2009, p. 1370), the artefact's influence does not come from its physicality, nor merely its installation in a said environment, but from the decisions, i.e., the results of intentional and bounded-rational processes. Those decisions, distinguishable solely from the analytical perspective, are made at, and intersect different levels and have different and unpredictable outcomes (e.g., greater or lesser autonomy). Even the technical knowledge needed by people undergoes significant transformations that cannot be attributed to simple dichotomies, such as flexibility/rigidity, upskilling/deskilling, or autonomy/heteronomy.

Fourth, the technical rationality concept of technology not only explores such opportunities, it interprets how these influence the overall regulating process.

In essence, this paper offers an alternative and complementary understanding of the problem of regulation in 'technologically dense'(Bruni, Pinch, & Schubert, 2013) settings and suggests how to best address these themes by using theories that advance along the third epistemological route.

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